

**Water and Sewer Notes (water and sewer plans):**

1. Rough grading shall be completed within ½" of plan grade prior to installation of underground utilities.
2. No trench shall be filled with bedding material or backfilled until the excavation and pipe laying, respectively, have been approved by the Engineering Supervisor's authorized representative.
3. A water pressure test is required of all water lines and a hydrostatic or air test is required of all sewer lines. Tests are to be conducted after backfilling is complete and compacted. All testing will conform to standards established by the responsible utility.
4. Water line disinfection is to be accomplished as outlined in Arizona Department of Environmental Quality (A.D.E.Q.) —"Bulletin No. 8" or per requirements of the local utility.
5. In order to protect public water systems from possible contamination, a water main shall not:
  - a. Infringe upon an area which is within six feet of either side of a sewer main and shall not be below, at the same level as, or less than two feet above the top of the sewer main, unless extra protection is provided. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe. If joint restraint is provided it shall consist of encasing both the water and sewer mains in at least six inches of concrete.
  - b. Under any circumstances, infringe upon an area which is within two feet of either side of or two feet below the sewer main.

No water pipe shall pass through, or come into contact with any part of a sewer manhole. The minimum horizontal separation between water mains and manholes shall be six feet, measured from the center of the manhole.

The minimum separation between force mains or pressure sewers and water mains shall be two feet vertically and six feet horizontally under all conditions. Where a sewer force main crosses above a water line, or less than six feet below it, the sewer main shall be encased in at least six inches of concrete for 10 feet on either side of the water main.

All distances are measured perpendicularly from the outside of the sewer main to the outside of the water main. These separation requirements do not apply to building plumbing or individual house service connections.

6. No water settling of trench fill material is allowed.
7. All water and sewer design and construction shall conform to the current Arizona Department of Environmental Quality (A.D.E.Q.) requirements. When A.D.E.Q. requirements are in conflict with these standards, the more restrictive shall apply.
8. Tracer wires and tapes shall be installed prior to testing the water or sewer main.

6. The location of all water valves, fire hydrants, and manholes must at all times during construction be referenced and made accessible to the County.

7. Utility facilities in conflict with this work will be relocated by the permittee or the utility owner. This activity shall be coordinated with the owner of the utility to prevent any unnecessary interruption of service to existing customers.

8. Existing street and traffic signs will be maintained during construction and relocated by the permittee as directed by the Engineering Supervisor or his authorized representative.